Computer Science Talking Points

The Background

The K-12 Computer Science for Utah Grant Program request $10.2M ongoing funding necessary to fulfill the vision of the Utah State Board of Education Computer Science Taskforce, H.B. 227 (2019), and the Utah Computer Science Master Plan. Governor Herbert announced this goal in December 2018. Talent Ready Utah, in connection with the USBE have collaborated on this initiative. The goal aligns with the call from leaders in Utah to provide all students with the opportunity to learn computer science 2022. The request establishes funding for the creation of a qualified grant to support local education agencies with their local 4-year strategic plans to implement K-12 computer science learning across all grades (K-12).

K-12 Computer Science Initiative Top Line Talking Point

Utah's K-12 Computer Science Grant Program provides funding and direction to help district and charter schools better integrate computer science education into all curriculum and ensure all students have the opportunity to learn computer science in every public school in the state by 2022.

Other Talking Points

Funding (Audience: Taxpayers): The K-12 Computer Science for Utah Grant Program offers $10.2 million in ongoing grant funding to accomplish this goal. Funding will be used to supplement locally determined strategic plans.

Uses (Audience: Education Community): Money will be used to provide high-quality professional development and support student outcomes and inclusion for all K-12for all K-12 educators to build capacity for teaching computer science.

Rigor and Relevance (Audience: IT Industry): The instruction will be grounded in Utah's K-12 Computer Science Framework as adopted by the Utah State Board of Education and aligned with the Utah Computer Science Master Plan.

Utility (Audience: Parents and Students): Computer science instruction helps Utah students:

- Think critically
- Develop problem-solving skills, logic and computational thinking capabilities
- Build employable skills for any future job that is touched by technology
- Ensure all students have the skills needed for the future of work

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Data Points

58,000 Utah High School Students attended a school not offering CS Courses

2018-2019

522 exams taken in AP Computer HS students in 2019
156 took AP CS A and **366** AP CSP

22% Female (13% for AP CS A/25% for AP CSP)
56 taken by Hispanic (11 AP CS A/45 AP CSP)
9 by Black Students (1 AP CS A/8 AP CSP)
1 by American Indian / Alaska Native (0 AP CS A/1 AP CSP)
1 by Native Hawaiian/ Pacific Islander (0 AP CS A/1 AP CSP)

Recent State Action

- The Utah Computer Science Education Master Plan was adopted in July 2019 by USBE and the Talent Ready Utah Board.
- The State Board of Education adopted a framework for K–12 computer science standards in 2018 and is slated to approve K–5 grade-level standards in October 2019. The State Board of Education began development of 6–12 grade-level standards in September 2019.
- HB 227 (2019) allocated $3.15M one-time for the Computer Science for Utah Grant Program per year for FY 2020. This one-time funding established a planning grant for school districts and charter schools. This planning grant is to provide resources to support all LEAs statewide in engaging key stakeholders, such as teachers, to begin the process to develop the LEA full computer science plan to meet the goal of providing access to all students in computer science by 2022.
- Governor Gary Herbert is a member of the Governors' Partnership for K–12 Computer Science.
- Utah is a member of the Expanding Computing Education Pathways (ECEP) Alliance.

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Why Computer Science for Utah

Computer science teaches students about technology, encourages them to think critically, helps them develop problem-solving skills, and prepares our next generation of learners, teachers, thinkers, and innovators to make a robust contribution in tomorrow's digital world. It also puts students on the path toward some of the highest-paying, fastest growing jobs in America.

Computing occupations are the number one source of new wages in our modern economy, and a computer science major can earn 40% more than the average college graduate. Women who learn computer science in high school are ten times more likely to major in the subject in college.

There are 4,663 open computing jobs in Utah (2.6 times the average demand rate)—jobs that come with an average salary of over $81,000, nearly double the state's average salary ($46,460).

Not all students need to be computer science majors, but computer science education should be fundamental in K-12 education to prepare students for jobs, most of which will require some basic understanding of how technology and computers work.

All students should have access to these workforce opportunities, if they choose. Unfortunately, women and minorities are not well represented in these fields and roles. Students must be exposed to these options during their foundational educational experiences.

Industry Commitment to Utah K-12 Computer Science

The Community Foundation of Utah partnered with Utah industry leaders to launch the Silicon Slopes Computer Science Fund, the first-ever Field of Interest Fund in the nation dedicated to computer science. The Silicon Slopes Computer Science Fund is designed to fill gaps between state funding and community needs while also supporting innovation and long-term impact outcomes. The Silicon Slopes Computer Science Fund is aligned with the Utah Master Plan for Computer Science, informed by the State's Computer Science Landscape Report, and complementary to the work of the Utah State Board of Education and other stakeholders driving measurable outcomes around K-12 computer science education. The Silicon Slopes Computer Science Fund was seed funded with contributions by Silicon Slopes founders. The Community Foundation of Utah's strategy for the Fund will complement the state's investment in district and charter school plans with resources necessary to create a state ecosystem for expanding computer science to all.

Here are a couple examples of initiatives the Silicon Slopes Computer Science Fund could support:

- Grants focused on nonprofit organizations providing specialized programming and interventions designed to increase diversity in technology

- Innovation grants to support outstanding computer science learning outcomes through replicable models